

REMARKS

This Response is submitted in response to the outstanding Office Action, dated August 23, 2005. Claims 1 through 20 are presently pending in the above-identified patent application. No additional fee is due.

5 In the Office Action, the Examiner rejected claims 1-20 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In addition, the Examiner rejected claims 1-4, 7-10, 13-15, and 17-18 under 35 U.S.C. §103(a) as being unpatentable over Babu et al. (United States Patent Publication Number 2003/0130855) in view Yang et al. (United States Patent Number 6,801,141). The Examiner indicated that claims 5-6, 11-12, 16, and 19-20 would be
10 allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Enablement

Claims 1-20 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner asserts that the claims contain subject matter that was not sufficiently described in the Specification. In particular, the Examiner asserts that claims 1, 7 and 13 recite the limitations of an “input string has symbols belonging to a partially *cumulative* (sic) alphabet.” Claims 1, 7 and 13, however were amended to recite the limitations of an “input string has symbols belonging to a partially *commutative* alphabet.” (emphasis added).

20 Applicant submits that the step of generating a lexicographic normal form from the input string, using only a single pass over said input string, *wherein the input string has symbols belonging to a partially commutative alphabet,*” is described in the Specification in such a way that a person of ordinary skill in the art can make and use the invention.

For example, FIG. 3 and the corresponding text illustrates a normal form generation process 300. On page 17, lines 1-5, it was noted that:

25 An algorithm (as well as exemplary pseudocode) to compute both the lexicographic normal form and the Foata normal form of an interchange class from one of its members was provided in D. Perrin, “Words Over a Partially Commutative Alphabet,” in A. Apostolico and Z. Galil, ed., Combinatorial Algorithms on Words, NATO ASI Series, Volume F12, 329-340, (Springer, Berlin, 1985),
30 incorporated by reference herein.

Thus, given this disclosure, a person of ordinary skill in the art can “generat(e) a lexicographic normal form from the input string, using only a single pass over said input string, *wherein the input string has symbols belonging to a partially commutative alphabet.*”

5 Thus, Applicant respectfully requests that the rejection under 35 U.S.C. §112, first paragraph, be withdrawn.

Independent Claims 1, 7 and 13

Independent claims 1, 7, and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Babu et al. in view Yang et al. In particular, the Examiner acknowledges that
10 Babu does not disclose a grammar based lossless data compression scheme and does not disclose a lexicographic and/or Foata normal form, but asserts that both forms call for ordering/sorting the input string and, hence, can be processed in the compression scheme of Babu.

Applicant notes that Babu is directed to a method for generating a data model for compressing a *data table* (see, Abstract). Applicant notes that Babu does not disclose or suggest
15 utilizing input strings that have symbols belonging to a partially commutative alphabet, and the methods disclosed by Babu do not support input strings that have symbols belonging to a partially commutative alphabet. The independent claims of the present invention were previously amended to require that the *input string has symbols belonging to a partially commutative alphabet*. Support for this amendment can be found on page 4, line 30, to page 15, line 24, as well as 17, lines 1-5, and
20 FIG. 3 and the corresponding text of the originally filed specification.

It is noted that the Examiner has not even asserted that any portion of Babu discloses or suggests that the *input string has symbols belonging to a partially commutative alphabet*.

Thus, Babu et al. and Yang et al., alone or in combination, do not disclose or suggest generating a lexicographic normal form from said input string, using only a single pass over said
25 input string, wherein said input string has symbols belonging to a partially commutative alphabet, as required by independent claim 1, as amended, do not disclose or suggest generating a Foata normal form from said input string, wherein said input string has symbols belonging to a partially commutative alphabet, as required by independent claim 7, as amended, and do not disclose or suggest generating a normal form from said input string, using only a single pass over said input

string, wherein said input string has symbols belonging to a partially commutative alphabet, as required by independent claim 13, as amended.

Dependent Claims 2-6, 8-12 and 14-20

Dependent claims 2-4, 8-10, and 14-18 were rejected under 35 U.S.C. §103(a) as
5 being unpatentable over Babu et al. in view Yang et al.

Claims 2-6, 8-12 and 14-20 are dependent on claims 1, 7, and 13, respectively, and are therefore patentably distinguished over Babu et al. and Yang et al. (alone or in any combination) because of their dependency from amended independent claims 1, 7, and 13 for the reasons set forth above, as well as other elements these claims add in combination to their base claim. The Examiner
10 has already indicated that claims 5-6, 11-12, 16, and 19-20 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

All of the pending claims, i.e., claims 1 through 20, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for
15 expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,



Kevin M. Mason
Attorney for Applicant(s)
Reg. No. 36,597
Ryan, Mason & Lewis, LLP
1300 Post Road, Suite 205
Fairfield, CT 06824
(203) 255-6560

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